[WHAT IS CLAIMED IS]

1. A method of electrochemically detecting a catalytic reaction product generated by progress of catalytic reaction in a first lump of liquid and dissolved in the first lump of liquid, the method comprising:

containing the first lump of liquid and a second lump of liquid in a liquid bath, the second lump of liquid being in contact with the first lump of liquid to form a liquid-liquid interface and not dissolving the catalytic reaction product;

arranging a working electrode in the first lump of liquid and arranging a counter electrode and a reference electrode in the second lump of liquid; and

detecting a current flowing through the working electrode by an oxidation or reduction reaction of the catalytic reaction product at the working electrode.

2. The method according to claim 1, wherein

the number of the liquid baths is one,

the working electrodes are arranged,

the first lump of liquid is lumps of liquid independently contained in the liquid bath without being continuous to each other by corresponding to the working electrodes,

the second lump of liquid is one continuous lump of liquid that is in contact with all of the lumps of the first lump of liquid to individually form the liquid-liquid interface, and

the number of the counter electrodes and the number of the reference electrodes are one each.

3. The method according to claim 1 or 2, wherein

the working electrode is located at a bottom surface of the liquid bath, and

the first lump of liquid is located on the bottom surface and covered with the second lump of liquid.

4. The method according to claim 3, wherein at least one of the surface of the working electrode and an annular portion surrounding the surface of the working electrode of the bottom surface has a hydrophilicity.

5. The method according to claim 3 or 4, wherein the region of the bottom surface where the second lump of liquid is located has a hydrophobicity.

6. The method according to claim 1, wherein

a well is configured on the bottom surface of the liquid bath, and

the working electrode and the first lump of liquid are located in the well.

7. The method according to claim 2, wherein

wells are configured on the bottom surface of the liquid bath,

the working electrodes are located in the respective wells, and

the lumps of the first lump of liquid are located in the respective wells.

8. The method according to claim 6 or 7, wherein

at least one of the surface of the working electrode and the bottom surface located in the well has a hydrophilicity.

9. A transducer for electrochemically detecting a catalytic reaction product generated by progress of a catalytic reaction in a solution, the

transducer comprising a structure with a liquid bath configured to contain the solution and mounted on an LSI chip, wherein

electrodes arranged in an array on the LSI chip are located in a sensor region defined on a bottom surface of the liquid bath, and

the LSI chip is characterized in that at least one of the surfaces of the electrodes and annular surfaces surrounding the respective surfaces of the electrodes has a hydrophilicity and/or the LSI chip is characterized in that regions in the sensor region other than the surfaces of the electrodes and the annular surfaces have a hydrophobicity, or regions in the sensor region other than the surfaces of the electrodes have a hydrophobicity.

10. A transducer for electrochemically detecting a catalytic reaction product generated by progress of a catalytic reaction in a solution, the transducer comprising a structure with a liquid bath configured to contain the solution and mounted on an LSI chip, wherein

wells arranged in an array are formed in a sensor region defined on a bottom surface of the liquid bath, and

the electrodes provided on the LSI chip are located in the respective wells.

11. The transducer according to claim 10, wherein the LSI chip is characterized in that at least one of the surfaces of the electrodes and the annular surfaces that are located in the wells and surround the respective surfaces of the electrodes has a hydrophilicity.